<u>**AMENDMENTS TO THE CLAIMS**</u>

1-4. (Cancelled)

5. (Original)   A polishing method comprising:

    measuring a thickness of a film formed on a substrate;

    inputting a desired thickness of a film formed on a substrate to be polished;

    storing polishing rate data on at least one past substrate in a storage device;

    calculating a polishing rate and an optimal polishing time based on the polishing rate data

and the desired thickness by using a weighted average method which weights the polishing rate

data on a lately polished substrate; and

    polishing a subsequent substrate for the optimal polishing time.

6. (Currently Amended)   The polishing method as recited in claim 5, further comprising

calibrating <u>a measuring unit which performs</u> said measuring at a predetermined frequency ~~with~~

~~use of~~ <u>by using</u> a calibration substrate having a known thickness of a film formed thereon.

7. (Original)   A polishing method comprising:

    measuring a thickness of a film formed on a substrate;

    inputting a desired thickness of a film formed on a substrate to be polished;

    storing polishing rate data on at least one past substrate in a storage device;

    calculating a polishing rate and an optimal polishing time including a margin so as not to

excessively polish a subsequent substrate based on the desired thickness and a range of a

variation of the polishing rate data; and

polishing the subsequent substrate for the optimal polishing time.

8. (Currently Amended)   The polishing method as recited in claim 7, wherein after the optimal polishing time is calculated based on a polishing result of a first substrate in ~~a lot,~~ a group of substrates, a subsequent substrate in ~~the lot~~ the group of substrates is polished for the optimal polishing time.

9-23. (Cancelled)

24. (New)   The polishing method of claim 5, wherein polishing rate in the polishing rate data is calculated as film removed per unit time when polishing under a predetermined pressure.

25. (New)   The polishing method of claim 5, wherein the polishing rate data is obtained by measuring film thickness of the at least one past substrate before polishing, during polishing, and after polishing of the at least one past substrate.

26. (New)   The polishing method of claim 25, wherein polishing rate in the polishing rate data is calculated as film removed per unit time when polishing under a predetermined pressure.

27. (New)   The polishing method of claim 7, wherein polishing rate in the polishing rate data is calculated as film removed per unit time when polishing under a predetermined pressure.

28. (New)   The polishing method of claim 7, wherein the at least one past substrate includes at least two recently polished substrates; and

wherein the margin of the optimal polishing time is based on a variation in the polishing rate between the at least two recently polished substrates.

29. (New)   The polishing method of claim 28, wherein the margin is calculated by:

      (i)   (an amount of polishing) / (average polishing rate × 120%);

      (ii)   (an amount of polishing) / (maximum polishing rate in the past); or

      (iii)   (an amount of polishing × 80%) / (average polishing rate).

30. (New)   The polishing method of claim 7, wherein the polishing rate data is obtained by measuring film thickness of the at least one past substrate before polishing, during polishing, and after polishing of the at least one past substrate.

31. (New)   A polishing method comprising:

measuring a thickness of a film formed on a substrate;

inputting a desired thickness of the film formed on the substrate;

storing polishing rate data on at least one past substrate in a storage device, the at least one past substrate being recently polished;

calculating a polishing rate and an optimal polishing time based on the polishing rate data and the desired thickness of the film formed on the substrate by using a weighted average method which weights the polishing rate data on the at least one past substrate;

polishing the substrate for the optimal polishing time.

32. (New)   The polishing method of claim 31, wherein the polishing rate data on the at least one past substrate includes polishing rate data on at least two past substrates, the at least two past substrates including a more recently polished substrate and a less recently polished substrate; and

wherein said weighted average method assigns more weight to the polishing rate data on the more recently polished substrate than the polishing rate data on the less recently polished substrate.

33. (New)   The polishing method of claim 31, wherein polishing rate in the polishing rate data is calculated as film removed per unit time when polishing under a predetermined pressure.

34. (New)   The polishing method of claim 31, wherein the at least one past substrate includes at least two recently polished substrates; and

wherein said calculating the optimal polishing time includes calculating a margin based on a variation in the polishing rate between the at least two recently polished substrates.

35. (New)   The polishing method of claim 31, wherein the margin is calculated by:

      (i)   (an amount of polishing) / (average polishing rate × 120%);

      (ii)   (an amount of polishing) / (maximum polishing rate in the past); or

      (iii)   (an amount of polishing × 80%) / (average polishing rate).

36. (New)   The polishing method of claim 31, wherein the polishing rate data is obtained by measuring film thickness of the at least one past substrate before polishing, during polishing, and after polishing of the at least one past substrate.